

31. (New) A method of operating on data comprising:
receiving input data at a static memory block;
compressing the input data to produce compressed data;
storing the compressed data into a dynamic memory block;
reading the compressed data from the dynamic memory block; and
decompressing the compressed data, wherein receiving, compressing, storing, reading,
and decompressing are performed on a single chip.
32. (New) The method of claim 31 further comprising:
detecting for an error during compressing and decompressing; and
correcting the error during compressing and decompressing.

REMARKS

Applicant has reviewed and considered the Office Action mailed on March 13, 2002, and the references cited therewith.

Claims 1, 2, 4-6, 8-12, and 15-21 are amended, claim 3 is canceled, and claims 22-32 are added; as a result, claims 1, 2, and 4-32 are now pending in this application.

Claim Objections

Claims 15, 16, and 20 were objected to because of informalities.

Claims 15, 16, and 20 are amended as suggested by the Examiner.

§102 Rejection of the Claims

Claims 1, 2, 4-12, and 18-21 were rejected under 35 USC § 102(b) as being anticipated by Dye (U.S. Patent No. 6,145,069).

Claim 1 recites a memory device comprising a main memory, a cache memory, and a compressing and decompressing engine. Dye discloses a flash memory array 100 (Figure 3). The Flash memory array of Dye does not comprise a cache memory and the compressing and

decompressing engine. Further, the flash memory array of Dye is a “non-volatile” memory type, whereas the main memory of Claim 1 (as amended) is a “volatile” memory type. Therefore, the main memory of claim 1 and the flash memory of Dye are not the same type of memory.

Claim 1 is amended to further define the claim. As amended, claim 1 recites that the volatile main memory, the cache memory, and the compressing and decompressing engine are located in a “single” chip. Dye discloses a system (Figure 3) that includes a flash memory array 100, a SRAM cache 160, a compression engine 260, and a decompression engines 280, all being located in “multiple” chips. For example, flash memory array 100 is located in one chip. SRAM cache 160 and compression engine 260 and decompression engines 280 are located in another chip. Hence, the “single” chip of the memory device of claim 1 is different from the “multiple” chips of the system of Figure 3 of Dye.

In light of the reasons presented above, Applicant believes that claim 1, as amended, is not anticipated by Dye. Accordingly, Applicant believes that claim 1 is patentable. Applicant requests reconsideration and withdrawal the rejection of claim 1 and that claim 1 be allowed.

Claims 4, 6, 9, 11, 18, and 20 recite similar elements as that of claim 1. Therefore, Applicant believes that claim 4, 6, 9, 11, 18, and 20, as amended, are not anticipated by Dye. Accordingly, Applicant believes that claims 4, 6, 9, 11, 18, and 20 are patentable. Applicant requests reconsideration and withdrawal the rejections of claims 4, 6, 9, 11, 18, and 20 and that these claims be allowed.

Dependent claims 2, 5, 7, 8, 10, 12, 19, and 21 depend on claims 1, 4, 6, 9, 11, 18, and 20. Therefore, Applicant also believes that claims 2, 5, 7, 8, 10, 12, 19, and 21 are patentable for similar reasons presented above, plus the elements in the dependent claims. Accordingly, Applicant requests reconsideration and withdrawal the rejections of claims 2, 5, 7, 8, 10, 12, 19, and 21 and that these claims be allowed.

§103 Rejection of the Claims

Claims 3, and 15-17 were rejected under 35 USC § 103(a) as being unpatentable over Dye.

Claim 3 is canceled.

Claim 15-17 recites a method of increasing a storage density of a memory device in which a main memory, a compression and decompression engine, a cache memory, and an error detection and correction engine are located in a single chip. Dye does not teach or suggest a main memory, a compression and decompression engine, a cache memory, and an error detection and correction engine being located in a single chip. Therefore, Applicant believes that claims 15-17 are patentable over Dye. Accordingly, Applicant requests reconsideration and withdrawal the rejection of claims 15-17 and that these claims be allowed.

CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's representative at (612) 373-6969 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Commissioner of Patents, Washington, D.C. 20231, on this 13 day of June, 2002.

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Signature

